

The elevation and its distribution in geomorphological regions of the European Russia

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Abstract

© Published under licence by IOP Publishing Ltd. Spatial differences of elevation were analysed by side of view of geomorphological boundaries on the European Russia territory. Geomorphological pattern of the studied territory was taken from Geomorphological Map of the USSR at scale of 1: 2 500 000. There 2401 fragments for combinations of 58 types of structural landforms and 22 types of sculptural landforms were allocated. The elevation values computed by digital elevation model (cell size - 200 m, number of cells - 322M) based on SRTM (south of 60 nl.) and GDEM 2010 (north of 60 nl.) resampled data. It was founded that some types of structural (16 types) and sculptural (6 types) landforms located in the relatively thin intervals of elevation. Using of elevation above sea level is needed for effective automatic recognizing these landform regions.

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References

- [1] Giles P T and Franklin S E 1998 *Geomorphology* 21 251-264
- [2] Ventura S J and Irvin B J 2000 *Terrain analysis: principles and applications* (Hoboken: John Wiley & Sons) 267-294
- [3] Drăguț L and Blaschke T 2006 *Geomorphology* 81 344
- [4] Saadat H, Bonnell R, Sharifi F, Mehuys G, Namdar M and Ale-Ebrahim S 2008 *Geomorphology* 100 453-464
- [5] Drăguț L and Eisank C 2012 *Geomorphology* 141 33
- [6] Lapparent A 1885 *Traite de géologie* (Paris: Librairie F. Savy)
- [7] Tanner W F 1959 *Am. J. Sci.* 257 458-460
- [8] Sharapov IP 1964 *Rel'ef Zemli i matematika* (Moscow: Misl') 72-79
- [9] Pike R J and Wilson S E 1971 *Geological Society of America Bulletin* 82 1079-84
- [10] Harlin J M 1978 *Mathematical Geology* 10 59-72
- [11] Kharchenko S V 2017 *Geomorphologiya* 2 24
- [12] Kharchenko S V 2017 17th International Multidisciplinary Scientific GeoConference SGEM 2017 (Albena, Bulgaria) 431-437
- [13] Gerasimov I P and Mescherikov J A 1968 *Morphostructure Encyclopedia of Geomorphology* ed RW Fairbridge (New York: Reinhold Book Corporation) 731-2
- [14] Geomorphological Map of USSR at the scale of 1:2 500 000 on 16 sheets